

DEPARTMENT OF TRANSPORTATION**DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch
690 Walnut Ave.St. 150
Vallejo, CA 94592-1133
(707) 649-5453
(707) 649-5493

Contract #: 04-0120F4Cty: SF/Ala Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-009068**Date Inspected:** 08-Sep-2009**Project Name:** SAS Superstructure**OSM Arrival Time:** 1900**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 700**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China

CWI Name:	Wan Wen Zhong, Zhang Zhi Neng, CWI Present			CWI Present:	Yes	No
Inspected CWI report:	Yes	No	N/A	Rod Oven in Use:	Yes	No N/A
Electrode to specification:	Yes	No	N/A	Weld Procedures Followed:	Yes	No N/A
Qualified Welders:	Yes	No	N/A	Verified Joint Fit-up:	Yes	No N/A
Approved Drawings:	Yes	No	N/A	Approved WPS:	Yes	No N/A
				Delayed / Cancelled:	Yes	No N/A

Bridge No: 34-0006**Component:** OBG and Tower Components**Summary of Items Observed:**

On this date Caltrans OSM Quality Assurance (QA) Inspector George Goulet was present during the times noted above for observations relative to the work being performed.

Bay 10

This QA inspector randomly observed the following work in progress in Bay 10:

SMAW welding of weld joint ND1-A6002-16-9A located on north tower. Welder was identified as 052930. ZPMC QC was identified as CWI Wan Wen Zhong (QC1). Assisting QC1 at this location and appearing to be monitoring the welding and recording data was ZPMC QC Inspector Yuan Hui Gang, who was not a CWI. The welding variables recorded by QC1 and QC1's assistant appeared to comply with WPS-B-T-2212-Tc-U5b. Also at this location and appearing to be monitoring the welding and recording data was ABF Representative Xie Yan.

SMAW welding of weld joint ND1-A6002-16-11B located on north tower. Welder was identified as 050289. ZPMC QC was identified as QC1. Assisting QC1 at this location and appearing to be monitoring the welding and recording data was ZPMC QC Inspector Yuan Hui Gang, who was not a CWI. The welding variables recorded by QC1 and QC1's assistant appeared to comply with WPS-B-T-3212-Tc-U5b. Also at this location and appearing to be monitoring the welding and recording data was ABF Representative Xie Yan.

FCAW welding of weld joint SSTL3-1B/K-80 located inside south tower shaft, lift 3, skins B/C between diaphragms 85M and 89M. Welder was identified as 203977. ZPMC QC was identified as QC1. Assisting QC1 at this location and appearing to be monitoring the welding and recording data was ZPMC QC Inspector Jiang

WELDING INSPECTION REPORT

(Continued Page 2 of 3)

Xiao Bo, who was not a CWI. The welding variables recorded by QC1 and QC1's assistant appeared to comply with WPS-B-T-2332-Tc-P4-F-2.

Bay 11

This QA inspector randomly observed the following work in progress in Bay 11:

FCAW welding of weld joint ESTL3-4K/K-39 located on east tower, lift 3, skins C/D corner plate butt weld between 89M and 92.5M diaphragms. Welder was identified as 070212. ZPMC QC was identified as CWI Zhang Zhi Neng (QC2). The welding variables recorded by QC2 appeared to comply with WPS-B-T-2233-B-U2a-F.

FCAW welding of weld joint ESTL3-4B/K-65, 66 located on east tower, lift 3, skins B/C at 85M diaphragm. Welder was identified as 066882. ZPMC QC was identified as QC2. The welding variables recorded by QC2 appeared to comply with WPS-B-T-2333-Tc-P5-F.

Bay 9 – PMT

This QA inspector monitored OBG Production Monitoring Test (PMT) #3017 for deck panels DP3017-001 and DP3018-001 at Gantry #2. Prior to the start of the PMT, the magnetic particle test (MT) of the tack welds was noted on the test panel as having been performed by ZPMC MT Inspector Jin Jianting. The visual inspection of tack welds and root gap was performed by ABF Representative Cao Haizhou (ABF), ZPMC CWI Guo Yan Fei (QC3), and this QA inspector. The start time for welding was approximately 0023 hours on Wednesday, 9/9/09. This QA inspector randomly verified and documented the welding amperage, voltage, and travel speed during the gas metal arc welding (GMAW) and submerged arc welding (SAW) processes, welds 1 thru 6 at the completion of both the GMAW root pass and SAW cover pass. The welding variables recorded by QC3 appeared to comply with WPS-B-T-2342-U1-(U-rib)-4. The welds were visually inspected by ABF, QC3 and this QA inspector. QC3 and ABF informed this QA inspector that all six welds were acceptable and this QA Inspector concurred. This QA inspector randomly witnessed ZPMC ultrasonic testing (UT) inspector, identified as Ma Jilong, perform UT on each of the 500 mm test welds for depth of penetration and conformance. This QA inspector selected fifteen designated locations for macroetch sampling per contract requirements. Each macroetch location was stamped by ZPMC personnel with the number 3017 and an individual macroetch identifying number for each macroetch. After removal from each of the weld test specimens, polishing, and acid etching of the selected end, the macroetches were evaluated with a 7X optical magnifier and accepted by QC3, ABF, and this QA inspector.

All fifteen sample macros appeared to meet requirements and were noted to appear acceptable. See Caltrans U-ribs PMT Inspection Sheet, ZPMC production monitoring test plate inspection report, and Caltrans Macro Etch Log - all dated 9/9/2008 for additional information.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.

Summary of Conversations:

No relevant conversations on this date except as noted above.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Serge Sinevod, 134-8257-0045, who represents the Office of Structural Materials

WELDING INSPECTION REPORT

(Continued Page 3 of 3)

for your project.

Inspected By: Goulet, George

Quality Assurance Inspector

Reviewed By: Carreon, Albert

QA Reviewer